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EXAMINER

AGRAWAL, CHRISTOPHER K

ART UNIT PAPER NUMBER

3726

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/709,045	Applicant(s) GHUMAN ET AL.	
	Examiner Christopher K. Agrawal	Art Unit 3726	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/8/04; 6/14/04; 10/25/05; 12/19/05.</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekine et. al. (U.S. Patent No. 5,127,569).**

3. *Claim 1:* Sekine teaches a method of designing a manufacturing process line (**Fig. 1**), for a vehicle closure (**Col. 1 lines 21-23**) the method comprising: identifying a manufacturing process comprising a set of discrete steps (**Col. 2 lines 10-32**) to be performed on at least one workpiece; identifying a plurality of standardized work cells (**e.g. sub-assembly lines/cells 1-6**), each work cell having at least one standardized workpiece presenter **25** that supports the workpiece in a predefined spatial orientation, and at least one standardized processing tool **46**; selecting a subset of the set of discrete steps to be performed at a work cell and selecting the standardized work cell for performing the subset of steps (**Col. 2 lines 25-32**); and repeating the selecting step for additional subsets of steps to be performed at one of the plurality of work cells until all of the discrete steps are assigned to one of the plurality of work cells (**Col. 7 lines 29-35**).

4. With respect to the acts of designing the manufacturing process line and identifying processes and work cells, these acts are inherent to the overall process of

Art Unit: 3726

the alleged invention as well as the cited reference. In order to put an assembly into tangible form, its elements must have at least been designed, identified and assembled in a certain manner. Furthermore, examiner interprets a vehicle "body panel" to anticipate a vehicle closure.

5. Claim 2: Sekine also teaches the method of claim 1 wherein a plurality of manufacturing process lines are identified as templates (**Figs. 1-3**).

6. Claim 3: Sekine also teaches the method of claim 2 wherein the manufacturing process line is completely designed by specifying a plurality of templates in a defined sequence (**Figs. 1-3**).

7. Claim 4: Sekine also teaches the method of claim 1 wherein the workpiece presenter and processing tool are interrelated with an integrated standard control system (**e.g. Col. 6 lines 30-37**).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine in view of Ozaku et. al. (U.S. Patent No. 6,467,675).**

10. Sekine teaches the method of claim 1 as described above but fails to specifically teach the method wherein a first work cell comprises the standardized workpiece

Art Unit: 3726

presenter comprising a pedestal welding work cell having a robotic arm for picking up and moving workpieces from a fixture to the processing tool selected from the group consisting essentially of a pedestal welder, a sealant dispensing unit and a projection weld gun.

11. Ozaku et. al. teaches a standardized workpiece presenter comprising a pedestal welding work cell having a robotic arm for picking up parts from a fixture and moving the parts to the processing tool selected from the group consisting essentially of a pedestal welder, a sealant dispensing unit, and a projection weld gun (**Col. 8 lines 37-67**).

12. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the workpiece presenter and processing tool of Ozaku with any one of the work cells of Sekine. It is very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

13. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine/Ozaku in view of Moran (U.S. Patent No. 5,014,901) and Okabe et. al. (U.S. Patent No. 3,763,344).**

14. Sekine/Ozaku teach the method of claim 5 as described above but do not specifically teach the method wherein a second work cell comprises the standardized workpiece presenter comprising a multiple sided trunnion fixture having a plurality of fixtures for a plurality of workpieces that are rotated about a horizontal axis and the processing tool is selected from the group consisting essentially of a welding robot and a sealant applicator.

15. Moran teaches a standardized workpiece presenter comprising a multiple sided trunnion fixture **16** having a plurality of fixtures for a plurality of workpieces that are rotated about a horizontal axis (**Col. 3 line 28 – Col. 4 line 10**).

16. Okabe et. al. teaches a processing tool that is a welding robot (**Fig. 2**).

17. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the workpiece presenter of Moran and processing tool of Okabe with any one of the work cells of Sekine. It is very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

18. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine/Ozaku/Moran/Okabe in view of Stiers et. al. (U.S. Patent No. 6,642,473).

19. Sekine/Ozaku/Moran/Okabe teach the method of claim 6 as described above but do not specifically teach the method wherein a third work cell comprises the standardized workpiece presenter comprising a fixture in a tool and the processing tool is selected from the group consisting essentially of a hemming tool, a clinching tool and a piercing tool.

20. Stiers teaches the method wherein a work cell comprises the standardized workpiece presenter comprising a fixture in a tool and the processing tool is selected from the group consisting essentially of a hemming tool **10**, a clinching tool and a piercing tool (**Col. 4 lines 31-53**).

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the fixture and processing tool of Stiers with any one of the work cells of Sekine. It is very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

22. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine et. al. (U.S. Patent No. 5,127,569).

23. Claims 8-11: Sekine teaches the method of claim 1 as described above but does not specifically teach the method wherein the vehicle body panel is a passenger compartment door, trunk lid, hatchback or engine compartment hood.

24. It would have been obvious to one of ordinary skill in the art to have incorporated the manufacture of a passenger compartment door, trunk lid, hatchback or engine compartment hood in the manufacturing process line of Sekine since it would have been obvious to use the method for the manufacture of any vehicle part or combination of parts. Examiner takes official notice that the use of a manufacturing line for the production of a "body panel" renders obvious the use of that line for producing other equivalent body panels such as compartment doors, trunk lids, hatchbacks and engine compartment hoods.

25. Claims 12-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine (U.S. Patent No. 5,127,569 in view of Ozaku et. al. (U.S. Patent No. 6,467,675), Moran (U.S. Patent No. 5,014,901) and Okabe et. al. (U.S. Patent No. 3,763,344).

26. Claim 12: Sekine teaches a manufacturing process line for making a vehicle closure (**Col. 1 lines 21-23**), the manufacturing process line comprising a first template having a plurality of work cells wherein the plurality of work cells are arranged in a predetermined sequence such that various workpiece presenters are disposed between

consecutive work cells (**see sequence of Fig. 1**) but does not specifically teach the process line wherein the work cells include a pedestal welding work cell having a robotic arm for picking up and moving a workpiece to a processing tool selected from the group consisting essentially of a pedestal welder, a sealant dispensing unit, and a projection weld gun; and a trunnion work cell having a multiple sided trunnion fixture that is rotated about a horizontal axis to position the workpiece near a second processing tool selected from the group consisting essentially of a welding robot and a sealant applicator; wherein the plurality of work cells are arranged in a predetermined sequence such that at least one trunnion work cell is disposed between consecutive pedestal welding work cells.

27. Ozaku teaches a pedestal welding work cell having a robotic arm for picking up and moving a workpiece to a processing tool selected from the group consisting essentially of a pedestal welder, a sealant dispensing unit, and a projection welding gun (**Col. 8 lines 37-67**).

28. Moran teaches a trunnion work cell having a multiple sided trunnion fixture **16** that is rotated about a horizontal axis to position the workpiece near a second processing tool (**Col. 3 line 28 – Col. 4 line 10**).

29. Okabe teaches a processing tool selected from the group consisting essentially of a welding robot (**Fig. 2**) and a sealant applicator.

30. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated any one of the standardized workpiece presenters or processing tools of the above references with any one of the work cells of Sekine. It is

Art Unit: 3726

very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

31. Claims 13-14: Sekine/Ozaku/Moran/Okabe teach the manufacturing process line of claim 12 but do not disclose any specific number or sequence of pedestal welding cells and trunnion work cells.

32. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the pedestal welding work cells or trunnion work cells of the above references in any number, sequence or arrangement as desired. It is very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

33. Claim 15: Sekine also teaches the manufacturing process line comprising a material handling robot **25 (Fig. 11)** for transporting workpieces between work cells.

34. Claims 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine/Ozaku/Moran/Okabe in view of Stiers et. al. (U.S. Patent No. 6,642,473)

35. Claim 16: Sekine/Ozaku/Moran/Okabe teach the manufacturing process line of claim 12 but do not specifically teach the process line including a hem clinch work cell.

Stiers teaches the method wherein a work cell comprises the standardized workpiece presenter comprising a fixture in a tool and the processing tool is selected from the group consisting essentially of a hemming tool **10**, a clinching tool and a piercing tool (**Col. 4 lines 31-53**).

36. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the hem clinch work cell of Stiers with the manufacturing process lines of Sekine/Ozaku/Moran/Okabe. It is very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

Art Unit: 3726

37. Examiner further notes that it is obvious and well known for a second template to receive a workpiece from a first template and perform additional operation on the workpiece to complete the fabrication thereof.

38. Claims 17-18: Sekine/Ozaku/Moran/Okabe/Stiers teach the manufacturing process line of claim 16 but do not disclose any specific number or sequence of pedestal welding work cells, trunnion work cells or hem clinch work cells.

39. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the pedestal welding work cells, trunnion work cells or hem clinch work cells of the above references in any number, sequence or arrangement as desired. It is very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

40. Claim 20: Sekine/Ozaku/Moran/Okabe/Stiers teach the manufacturing process line of claim 16. Sekine also teaches the manufacturing process line comprising a material handling robot **25 (Fig. 11)** for transporting workpieces between work cells.

41. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine/Ozaku/Moran/Okabe/Stiers in view of Bullen (U.S. Patent No. 6,001,181).

42. Sekine/Ozaku/Moran/Okabe/Stiers teach the process line of claim 18 but do not specifically teach the process line wherein a work cell is configured with a sealant dispensing unit as a processing tool.

43. Bullen teaches a processing tool that is sealant dispensing unit (**see abstract**).

44. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the sealant dispensing processing tool of Bullen with the manufacturing process lines of Sekine/Ozaku/Moran/Okabe/Stiers. It is very well known within the art of manufacturing and more specifically assembly line manufacturing to place machine cells having various workholders and tools in various arrangements as desired. For example, it would be obvious for a designer to place a work cell having a hexapod manipulator and a welder in a location of the assembly line where it is desirable to have a workpiece welded while being held by a hexapod manipulator. It has been held that mere arrangement of various components does not constitute patentable matter. *In re Japikse*, 86 USPQ 70.

Conclusion

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher K. Agrawal whose telephone number is (571) 272-3578. The examiner can normally be reached on Mon-Fri 8:30AM-5:00PM.

46. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Jimenez can be reached on (571)272-4530. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3726

47. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CKA


MARC JIMENEZ
PRIMARY EXAMINER
2-13-04